

CLAIMS:

1. A combined wireless transceiver and signal conversion unit comprising a radio receiver for receiving a wireless radio signal, a converter for converting the signal into a form having a communications protocol supported by a communications port of a user digital device, and an output for outputting the converted signal, an input device for receiving a communications signal from the communication port of a user digital device and a transmitter for converting the received signal to a form for wireless transmission.

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2. A combined wireless transceiver and signal conversion unit as claimed in claim 1, wherein said input device is adapted to support the communications protocol of communication signals from the communications port of a user digital device.

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15 3. A combined wireless transceiver and signal conversion unit as claimed in claim 1 wherein said converter and input device are adapted to support the same communications protocol supported by a communications port of a user digital device.

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4. A combined wireless radio transceiver and signal conversion unit as claimed in claim 1, wherein at least one of the converter and the input device is adapted to convert a signal it receives for transmission into a digital subscriber line formatted signal.

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5. A combined transceiver and signal conversion unit as claimed in claim 4, wherein at least one of the signal converter and the input device is adapted to convert the received signal into any one or more of an Asymmetric Digital Subscriber Line (ADSL), a Symmetric Digital Subscriber Line (SDSL), a High Data Rate Digital Subscriber Line (HDSL) and a Very High Data Rate Digital Subscriber Line (VDSL) formatted signal.

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6. A combined wireless radio transceiver and signal conversion unit as claimed in claim 1, wherein at least one of said converter and input device are adapted to support at least one of an Ethernet communications protocol, an optical signal
5 communications protocol, an IEEE 1394-1995 communications protocol, a plain old telephone service (POTS) communications protocol, a local wireless communications protocol, a Home Phone Line Network Alliance (HPNA) communications protocol, an AC power line communications protocol and an IBM token ring
10 network communications protocol.

7. A combined wireless radio transceiver and signal conversion unit as claimed in claim 1, wherein said radio receiver comprises a down-converter for converting the received radio signal to an intermediate frequency signal.

15 8. A combined wireless radio transceiver as claimed in claim 7, further comprising a tuner for demodulating the intermediate frequency signal.

9. A combined wireless radio transceiver and signal conversion unit as claimed in claim 1, further comprising a
20 tuner for demodulating the received radio signal.

10. A combined wireless radio transceiver and signal conversion unit as claimed in claim 1, wherein said transmitter comprises a modulator for modulating a communications signal received from said input device.

25 11. A combined wireless radio transceiver and signal conversion unit as claimed in claim 10, further comprising an up-converter for up-converting the signal from said modulator to the desired wireless transmission frequency.

12. A combined transceiver and signal conversion unit as
30 claimed in claim 1, further comprising a monitoring device for monitoring a status of at least one of the radio receiver,

radio transmitter and another component of said unit, and for outputting a signal representative of the monitored status.

13. A combined transceiver and signal conversion unit as claimed in claim 12 wherein said monitoring device is adapted 5 to output the signal representative of the monitored status as a radio signal from said transmitter.

14. A combined wireless radio transceiver and signal conversion unit as claimed in claim 12, wherein said monitoring device is arranged to output a signal representative of the 10 monitored status via said output to a user digital device.

15. A combined transmitter and signal conversion unit as claimed in claim 12, wherein said status comprises a function of said receiver and/or transmitter and/or a parameter indicative of a condition of said receiver/transmitter and/or a 15 characteristic of said receiver and/or transmitter.

16. A combined wireless transceiver and signal conversion unit comprising a radio receiver for receiving a wireless radio signal, a converter for converting the signal to a form suitable for reception by a communications port of a user 20 digital device, and an output for outputting the converted signal, an input device for receiving a communications signal from a communications port of a user digital device, said input device being adapted to support the communications protocol of communication signals from the communications port of a user 25 digital device and a transmitter for converting the signal to a form for wireless transmission.

17. A combined wireless transceiver and signal conversion unit as claimed in claim 16, wherein said converter is adapted to convert the received signal into a form having a 30 communications protocol supported by a communications port of a user digital device.

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18. A combined wireless transceiver and signal conversion unit as claimed in claim 16, wherein said converter and input device are adapted to support the same communications protocol supported by a communications port of a user digital device.

5 19. A combined wireless radio transceiver and signal conversion unit as claimed in claim 16 wherein at least one of the converter and the input device is adapted to convert a signal it receives for transmission into a digital subscriber line formatted signal.

10 20. A combined transceiver and signal conversion unit as claimed in claim 19, wherein at least one of the signal converter and the input device is adapted to convert the received signal into any one or more of an Asymmetric Digital Subscriber Line (ADSL), a Symmetric Digital Subscriber Line (SDSL), a High Data Rate Digital Subscriber Line (HDSL) and a 15 Very High Data Rate Digital Subscriber Line (VDSL) formatted signal.

21. A combined wireless radio transceiver and signal conversion unit as claimed in claim 16, wherein at least one of 20 said converter and input device are adapted to support at least one of an Ethernet communications protocol, an optical signal communications protocol, an IEEE 1394-1995 communications protocol, a plain old telephone service (POTS) communications protocol, a local wireless communications protocol, a Home 25 Phone Line Network Alliance (HPNA) communications protocol, an AC power line communications protocol and an IBM token ring network communications protocol.

22. A combined transceiver and signal conversion unit as claimed claim 16, further comprising a monitoring device for 30 monitoring a status of at least one element of said combined transceiver and signal conversion unit, and for outputting a signal representative of the monitored status.

23. A combined transceiver and signal conversion unit as
claimed in claim 22, wherein said status comprises a function
of said receiver and/or transmitter, and/or a parameter
indicative of a condition of said receiver/transmitter and/or a
5 characteristic of said receiver and/or transmitter.

24. A combined transceiver and signal conversion unit as claimed in claim 22, wherein said at least one element comprises at least one of the radio transmitter and the radio receiver.

10 25. A combined transceiver and signal conversion unit as
claimed in claim 22 wherein said monitoring device is adapted
to output the signal representative of the monitored function
as a radio signal from said transmitter.

26. A combined wireless radio transceiver and signal
conversion unit as claimed in claim 22, wherein said monitoring
device is arranged to output a signal representative of the
monitored function via said output to a user digital device.

27. A combined wireless transceiver and signal conversion unit as claimed in claim 16, wherein said converter is adapted
20 to convert a received radio signal having a first communications protocol for wireless communications between the transceiver and a transmitter with which it is adapted to communicate into a signal having a second protocol supported by a communications port of a user digital device.

25 28. A combined wireless transceiver and signal conversion
unit as claimed in claim 16, wherein said input device is
adapted to support a communications protocol of a
communications port of a user digital device and convert the
signal into one having a second protocol suitable for wireless
30 communications between the transceiver and a receiver with
which it is adapted to communicate.

29. A combined wireless radio transceiver and signal conversion unit as claimed in claim 16, wherein said transceiver is adapted to at least one of transmit and receive wireless signals having a frequency in the range of 2 GHz to 60
5 GHz.

30. A combined wireless radio receiver and signal conversion unit for use in a communication system, the unit comprising:

a radio receiver for receiving a wireless radio
10 signal carrying digital data;

a converter for converting the received radio signal carrying digital data into a signal having a form which can be read by end use subscriber terminating equipment; and

an output device for outputting the converted signal.

15 31. A combined receiver/converter unit as claimed in claim 30, wherein the converter is arranged to convert the received radio signal into a signal contained in a frequency band above the audio frequency band allocated for voice channels on a telephone subscriber line.

20 32. A combined receiver/converter unit as claimed in claim 31, wherein the signal converter is adapted to convert the radio signal into a Digital Subscriber Line formatted signal.

33. A combined receiver/converter unit as claimed in
25 claim 32, wherein the signal converter is adapted to convert the radio signal into any one or more of an ADSL, SDSL, HDSL, and VDSL formatted signal.

34. A combined receiver/converter unit as claimed in
claim 30, wherein the output device is arranged to output the
30 converted signal onto wiring of the type previously installed

in a subscriber's premises capable of conveying communication signals.

35. A combined receiver/converter unit as claimed in claim 30, wherein the converter is adapted to output the 5 converted signal onto at least one of a twisted-pair transmission line, an AC power line, a coaxial cable, a fibre for carrying optical signals and a local wireless communication channel.

36. A combined receiver/converter unit as claimed in 10 claim 30, further comprising a monitoring device for monitoring a status of at least one of the radio receiver and the converter and for outputting a signal representative of the monitored status.

37. A combined receiver/converter unit as claimed in 15 claim 36, wherein the output device is arranged to output the monitoring signal.

38. A combined receiver/converter unit as claimed in claim 30, wherein the wireless radio receiver is adapted to receive microwave radio signals in the range of 2 to 60 GHz.

20 39. A combined receiver/converter unit as claimed in claim 30 having a mounting for mounting the unit to structure on the outside of a building.

40. A combined receiver/converter unit as claimed in claim 30, further comprising a housing enclosing said receiver 25 and converter.

41. A combined receiver/converter unit as claimed in claim 40, wherein said housing is adapted to prevent the ingress of moisture into the housing.

42. A combined wireless radio transmitter and signal 30 conversion unit for use in a communication system comprising an

interface device capable of reading communication signals having a form output from end user terminating equipment, and a wireless radio transmitter, the interface device being arranged to convert the received signal into a signal

5 suitable for transmission by the transmitter, the transmitter being arranged to transmit the signal received from the interface device as a wireless radio signal.

43. A combined transmitter/converter unit as claimed in claim 42, in which the interface device is capable of
10 reading a Digital Subscriber Line formatted signal.

44. A combined transmitter/converter unit as claimed in claim 42, wherein the interface device is connected to and receives the input signal on wiring which is previously installed in the subscriber's premises for transmitting
15 electrical signals.

45. A combined transmitter/converter unit as claimed in claims 42, wherein the interface device is adapted for connection to at least one of a twisted-pair transmission line, an AC power line, a coaxial cable, a fiber for
20 carrying optical signals and a local wireless communication channel.

46. A combined transmitter/converter unit as claimed in claim 42, wherein the radio transmitter is adapted to transmit radio signals having microwave frequencies in the
25 range of 2 to 60 GHz.

47. A combined transmitter/converter unit as claimed in claim 42, having a mounting for mounting the unit to structure on the outside of a building.

48. A combined transmitter/converter unit as claimed in claim 42, further comprising a housing enclosing said
30 interface device and transmitter.

49. A combined receiver/converter unit as claimed in claim 30, wherein said converter is adapted to support any one or more of DSL, Ethernet, local wireless, optical, IEEE-1394, ISDN, POTS, and IBM token ring communication protocols.

5 50. A combined transmitter/converter unit as claimed in claim 42, wherein said interface device is adapted to support any one or more of DSL, Ethernet, local wireless, optical, IEEE-1394, ISDN, POTS, and IBM token ring communication protocols.

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